



Partner Reported Opportunities (PROs)
For Reducing Methane Emissions

Compressors/Engines ☐
Dehydrators ☐
Pipelines ☒
Pneumatics/Controls ☐
Tanks ☐
Valves ☐
Wells ☐
Other ☐

Inject Blowdown Gas into Low Pressure Mains

Applicable sector(s):

☐ Production ☐ Processing ☒ Transmission and Distribution

Partners reporting this PRO: Consolidated Edison Company of New York, Inc. El Paso Natural Gas Company

Other related PROs: Use Portable Compressors, Install Ejector, Install Flares, Close Main and Unit Valves Prior to Blowdown, Design Isolation Valves to Minimize Gas Blowdown Volumes

Technology/Practice Overview

Description

When compressors and/or pipeline segments are taken out of service for operational or maintenance purposes, it is a common practice to de-pressurize the natural gas to the atmosphere. Partners report saving this gas and reducing methane emissions by de-pressuring to a connected or nearby low-pressure fuel or product system.

Several options, driven by operational considerations, exist for performing this practice. In particular, companies can re-route gas to the low-pressure system by taking advantage of existing piping connections between high and low pressure systems, temporarily resetting or bypassing pressure regulators to reduce system pressure prior to maintenance, or installing temporary connections between high and low pressure systems.

Principal Benefits

Reducing methane emissions was:

☒ A primary justification for the project ☐ An associated benefit of the project

Operating Requirements

This practice requires pre-planning and manual operation of valves.

Applicability

This practice can be employed wherever there are low pressure gas systems that remain in service when nearby higher pressure systems are shut down.

Methane Savings

150 Mcf/yr

Costs

Capital Costs (including installation)

☒ < \$1,000 ☐ \$1,000-\$10,000 ☐ > \$10,000

Operating and Maintenance Costs (Annual)

☒ < \$100 ☐ \$100-\$1,000 ☐ > \$1,000

Payback (Years)

☒ 0-1 ☐ 1-3 ☐ 3-10 ☐ > 10

Methane Emission Reductions

Methane emission reduction levels are site specific and depend on the operating pressure of the compressors and low-pressure mains used for the blowdown, as well as the selected injection technology (e.g. simple piping connection versus portable compressor). Some of the partners reporting this practice used the EPA default value of 15 Mcf per compressor blowdown and reported 3 to 40 blowdowns per year.

Economic Analysis

Basis for Costs and Savings

Methane emission reductions of 150 Mcf/yr are associated with applying this practice for ten de-pressuring events at one compressor station using one new piping connections.

Discussion

This practice can payback quickly. Facility expenditures may be necessary to add additional piping from compressors to the low pressure mains. In addition, labor for planning and making regulator set-point adjustments could offset gas emissions savings.